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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,895

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EXAMINER

GIRARDI, VANESSA MARY

ART UNIT

PAPER NUMBER

2833

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,895	Applicant(s) ANDRE ET AL.	
	Examiner Vanessa Girardi	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 14, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>June 5, 06 - Sept 15, 06</u> . | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The disclosure is objected to because of the following informalities:
 - a. Page 15, line 12, plate-like frame element "125" should be -104-.
 - b. Page 20, line 1, "constructedon" should be –constructed on-.
 - c. Page 20, line 18, the opening cover "123" should be -120-.

Drawings

2. Figures 9-12 are objected to under 37 CFR 1.84. The drawings must be of sufficient quality such that all details in the drawings are reproducible in black and white in the printed patent.
3. The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The pressurization device (120, 121 and 122) and the slot (123) must be clearly illustrated or the features cancelled from claims 1, 14 and 20. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

- ❑ Claim 2; "the connecting point" lacks antecedent basis.
- ❑ Claim 9; "the upper and lower side" lack antecedent basis.
- ❑ Claim 10; "the side" of insertion opening lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 3, 7, 8, 9, 15 and 18 are rejected under 35 U.S.C. §102(b) as being anticipated by Liegl et al. (US 2002/0173199).

With respect to claims 1, 2, 3 and 18; Liegl et al. discloses a connector **1** for a sealed connection of a flat cable arrangement **6**, comprising: an external housing **2, 3**, which has an insertion opening [FIG. 5] for the insertion of the flat cable arrangement **6**, sealing elements **12, 13** comprising compressed gel [0020] on both sides [FIG. 1] of the flat cable arrangement **6**, which at a connection area **26** of the insertion opening for the flat cable arrangement **6** being so arranged that it only comes into effective contact with flat cable arrangement **6** when the flat cable arrangement is in an inserted condition, and a device (the housing **2, 3** serves) for the pressurization of the at least one sealing element comprising **12, 13** for sealing at least the connection area of the flat cable arrangement in inserted condition [0022]; the flat cable arrangement **6** comprises a flex foil [0016],

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With respect to claims 7, 8, 9; Liegl et al. discloses two sealing elements **12, 13** and the pressurization device **2, 3** wherein the sealing elements can be moved in a pincer-like movement in direction of the upper and lower side of the flat cable arrangement [FIG. 1]; and are capable of moving between a position which essentially completely opens the insertion opening to the connecting point [FIG. 5] and a position essentially closing the insertion opening [FIG. 1] characterized by catching or snapping means associated to the pressurization device [0024].

With respect to claim 15; Liegl et al. discloses the pressurization device **2, 3** is the connector housing cover for closing the insertion opening.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-6 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Liegl et al. (US 2002/0173199) in view of Schwant (6,196,863).

With respect to claim 4; Liegl et al. shows the connector substantially as claimed except for details pertaining to terminal contacts attached to the conductor ends of the flat cable arrangement.

Schwant shows an analogous connector [FIG. 1] having terminal contacts [ONE END OF **11**] arranged at the connection area of the connector for interacting with terminals [OTHER END OF **11**] attached to the conductor ends **31** of the flat cable arrangement **30**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ insulation displacement terminals in the Liegl et al. connector

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as taught by Schwant [COL. 3, LINES 30-39], enabling mounting of an electrical connector anywhere along the circuit providing tremendous flexibility with respect to tapping the circuit as well as repairing a connection on the circuit.

With respect to claims 5 and 6; Liegl et al. does not state the composition of the gel.

Schwant teaches [COL. 4, LINES 59-60] the use of a silicone or vulcanizing gel as the sealing element within the connector, both of which are dielectric.

With respect to claim 20; Liegl et al. shows the connector substantially as claimed except for details pertaining to terminal contacts attached to the conductor ends of the flat cable arrangement, as discussed above with respect to claim 4. Liegl et al. also does not show the compressed gel in the form of a pillow or cushion.

Schwant teaches the gel **24** is contained within membranes **22, 23**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to compose the gel within the Liegl et al. connector using the teachings of Schwant [COL. 3, LINES 12-26] to produce a sealing element that would not interfere with the electrical design of the connector yet would be pliable enough to provide precise sealing at the point where the connector joins the flat cable arrangement.

6. Claims 13, 14, 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Liegl et al. (US 2002/0173199) in view of Dean et al. (US 3,333,229).

With respect to claims 13, 14, and 16; Liegl et al. lacks a sealing element and pressurization device that can be inserted into a through hole within the connector housing after the insertion of the cable arrangement.

Dean et al. shows an analogous connector [FIG. 1] wherein the sealing element **18** and pressurization device **20** are inserted into a through hole **22** within the connector housing **10** after the cable arrangement has been inserted in the insertion opening [COL. 5, LINES 29-44], the pressurization device **20** having a slot **68** essentially corresponding to the cross-section of the flat cable arrangement **14** and through which the flat cable arrangement is guided [FIG. 2].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to consider a sealing element and pressurization device that are inserted into the opening after the flat cable arrangement as taught by Dean et al. [COL. 1, LINES 38-47] to modify the connector of Liegl et al. thereby producing a flat cable that is stabilized within the connector arrangement such that variations in cable thicknesses are accommodated and sealed against exposure, thus ensuring a longer service life.

With respect to claim 17; Liegl et al. does not show or teach the connector comprising a connector end.

Dean et al. shows the connector [FIG. 3] comprising a jacket or plug connector end **44** for connecting a counter connector **46** essentially opposite the insertion opening.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the connector of Liegl et al. as taught by Dean et al. [FIGS 5, 8 & 9] thereby producing a connector having greater versatility in its applications.

Allowable Subject Matter

7. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim, any intervening claims and overcoming any applicable objections discussed above.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 10; allowability resides, at least in part, with the prior art not showing or teaching the connector having guidance devices that extend at the side of the insertion opening arrangement diagonally from above and below the flat cable arrangement in conjunction with **ALL** the remaining limitations within claims 1 and 9.

With respect to claim 11; allowability resides, at least in part, with the prior art not showing or teaching the connector having guidance and catching devices assigned to guide the pressurization device, first in a normal direction in relation to the flat cable arrangement at the connecting point and then in an axial direction in relation to the flat cable arrangement at the connecting point or vice versa in conjunction with **ALL** the remaining limitations within claims 1 and 11.

Prior Art

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure:

US 2005/0020131 Beck et al. discloses a connector with a sealed connection using gel cushions.

US 5,161,981 Deak et al. discloses a connector having two covers which engage and compress elastomeric members.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Girardi: Telephone number (571) 272-5924.

Monday – Thursday 7 a.m. to 5:30 p.m. (EST)

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If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VG

Art Unit 2833
March 4, 2008

/Renee S Luebke/
Primary Examiner
Art Unit 2833